

# MXD1500 Base Station

## Expand Your Communication Coverage



Motorola's MXD1500 is a compact, full specification 50-Watt continuous duty Base Station/Repeater that enhances your analog conventional system seamlessly and cost effectively.

Modular in design, the MXD1500 easily caters to all frequency bands. Its rugged construction and extensive use of Surface Mount Technology offers outstanding reliability and efficiency for harsh operational conditions. Ideal for cost conscious users who want to expand their communication coverage without compromising on performance.

### All-in-one Repeater

The MXD1500 is an all-in-one repeater consisting of an Exciter, Receiver, PA and Controller. The MXD1500 is suitable for link applications in full duplex mode. A simplex option is available with an internally mounted changeover relay.

### Modular Design

The modular MXD1500 enables a fast changeover of RF modules; allowing an easy replacement of defective modules. The MXD1500, together with all of its individual RF modules, has been designed and screened to comply with international EMC/EMI guidelines.

### Easy-to-use Radio Service Software

With the Radio Service Software, you can easily select and programme the MXD1500's 255 RF channel capability, operating channels and channel frequencies. This software utility also enables you to assign any standard DCS code and CTCSS tone to any channel, programme and check RF parameters as well as remotely monitor, control and diagnose the base station.

### Feature-Packed

Developed with the latest component technology, the MXD1500 is a cost effective solution that does not compromise on performance.

#### • Wide Bandwidth

Exceptional frequency coverage between 30MHz and 870MHz complements the wide RF switching bandwidth.

#### • Crossbanding

Its functionally independent transmit and receive signals allow users the flexibility of transmitting on one band and receiving on another.

#### • Continuous Duty Operations

An automatic PA protection circuit reduces the output power when the transceiver heats up and when a high Voltage Standing Wave Ratio (VSWR) is reached. A thermally-controlled fan lowers the transmission temperature during continuous operations.

#### • Audio Clarity

Ensures clearer transmit and receive signals with low transient noise by using an extremely fast transmitter rise time and controlled soft starts.

#### • Communication Privacy

Recognises valid tones and transmits user-associated tones through the optional non-predictive CTCSS and full duplex DCS encoder/decoder.

### Options

- CTCSS encoder/decoder
- Simplex changeover relay
- -30°C temperature frequency stability
- Full duplex DCS/DPL operation



**Accelerated Life Testing**  
Stringent Motorola Accelerated Life Testing simulating five years of hard use in real life, EIA RS-316B in Shock, Vibration, Dust, Humidity, IPX4 for Sealing.



**MIL-STD 810C, D and E**  
Stamp of approval from the U.S. Military for use in rough environments.

Contact our dealer for more information

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### MXD1500 Specifications\*

#### General

Frequency Range	Band A2 to A3: 30-50MHz Band A to B: 66-88MHz Band C to Q2: 135 – 532MHz Band R to T: 805-870MHz
Switching Bandwidth	10-35MHz band dependent
Channel Spacing	25kHz or 12.5kHz programmable
RF Channels	255
Power Supply	13.8 VDC +/-20%
Temperature Range	-10 to +60°C
Duty Cycle	100% continuous
Dimensions (WxDxH)	483mm x 360mm x 89mm
Weight	9kg
Antenna Connection	TX: N type, RX: BNC

#### Receiver

Sensitivity (12db SINAD)	< -117dBm (0.3µV)
Intermodulation	>80dB
Blocking	>100dB
Frequency Stability	2.5PPM, 1.5PPM or 1PPM
Disc Output Bandwidth	DC to 5kHz (25kHz channel) DC to 3.4kHz (12.5kHz channel)
Audio Output Bandwidth	300Hz to 3kHz, +1/ -3dB
Audio Output Level	-10dBm nominal @ 600 Ω(bal)
Audio Distortion	<2%
De-emphasis	6dB per octave (+1, -3dB)
Current Drain Receive	460mA typical

#### Transmitter

RF Power 30-520MHz	5 to 50 Watts programmable
RF Power 805-870MHz	5 to 35 Watts programmable
Frequency Stability	20PPM, 2.5PPM, 1.5PPM(std) or 1PPM
TX Spurious	<-90dBc
Deviation Limiting	2.5/5kHz programmable
Audio Bandwidth DC FM Input	DC to 3.4kHz
Audio Bandwidth VF Input	300Hz to 3400Hz
Audio Input Level	-10dBm nominal @ 600 Ω (bal)
Audio Distortion	<2%
De-emphasis	6dB per octave (+1, -3dB)
Current Drain Transmit	<11A

\* Availability subject to country's law and regulations  
All specifications shown are typical and subject to change without notice

